D-Link
Quick Installation Guide

This product can be set up using any current web browser, i.e., Internet Explorer 6x, Netscape Navigator 4x.

D-Link DFL-900 VPN/Firewall Router

Before You Begin

It's best to use a computer with an Ethernet adapter for configuring the DFL-900. The default IP address for the DFL-900 is **192.168.1.254** (LAN1 at the port number 2) with a Subnet Mask of **255.255.255.0**. You will need to assign your computer a Static IP address within the same range as the DFL-900's IP address, say 192.168.1.2 to configure the DFL-900. **See the Appendix if you need assistance in assigning a Static IP address for your network adapter.**

Check Your Package Contents

These are the items included with your DFL-900 V.A1 purchase:

- • **DFL-900 VPN/Firewall Router**

- • **CD-ROM (containing Manual and Warranty)**

- • **Console Cable (RS232)**

- • **Ethernet Cable (RJ45)**

- •**Power Cord**

If any of the above items are missing, please contact your reseller.

System Architecture

DFL-900 is an integrated all-in-one solution that can facilitate the maximum security and the best resource utilization for the enterprises. It contains a high-performance stateful packet inspection (SPI) Firewall (400Mbps at 3000 rules), policy-based NAT, wire-speed VPN (simultaneous 2000 tunnels), upgradeable Intrusion Detection System, Dynamic Routing, Content Filtering, Bandwidth Management, WAN Load Balancer, and other solutions in a single box. It is one of the most cost-effective all-in-one solutions for enterprises.
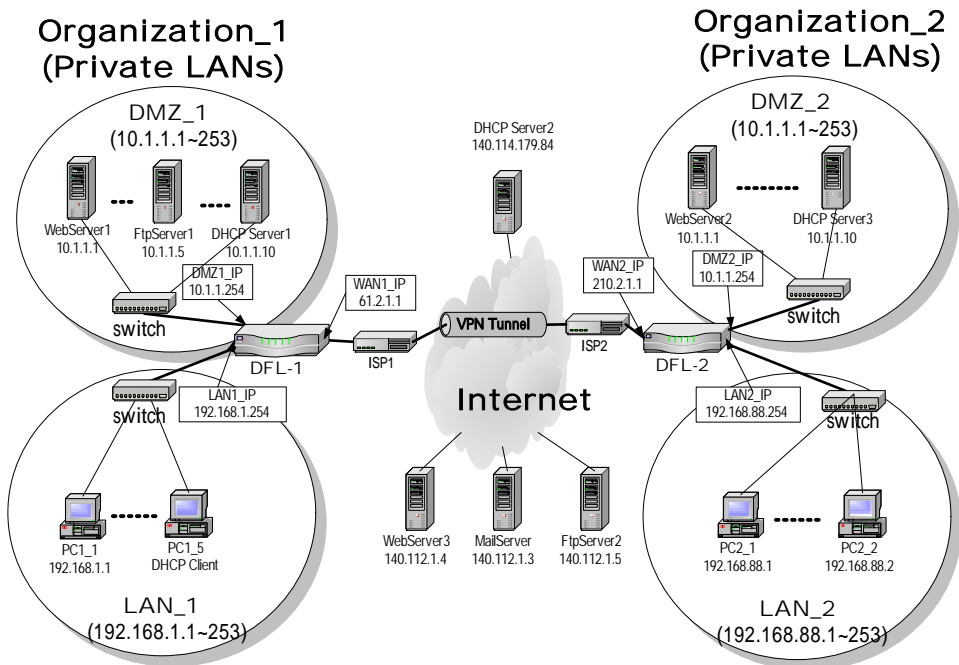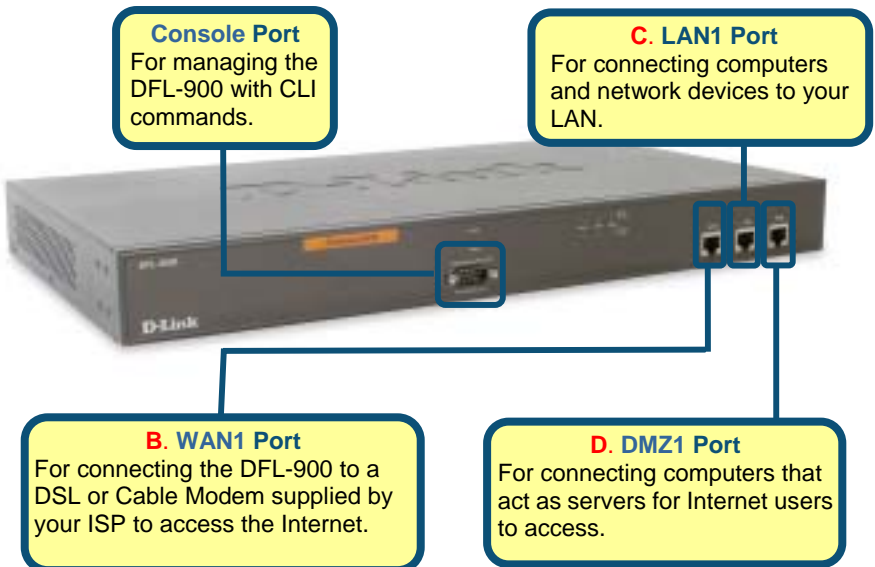
① Connecting the DFL-900

A. First, connect the power cord to the **Power Socket** at the back panel of the DFL-900 and then plug the other end of the power adapter to a wall outlet or power strip. The Power LED will turn **ON** to indicate proper operation.

> **A.** Power Socket
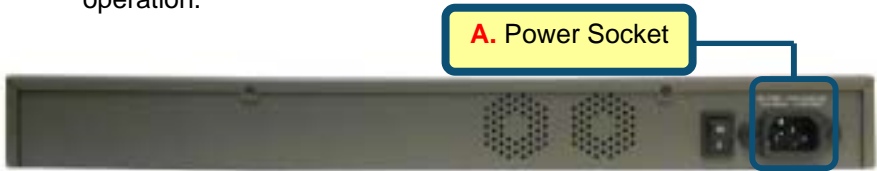
B. Using an Ethernet cable, insert one end of the cable to the **WAN port** on the front panel of the DFL-900 and the other end of the cable to a DSL / Cable modem or other internet access devices.

C. Computers with an Ethernet adapter can be directly connected to any of the **LAN ports** using a **cross-over** Ethernet cable.

D. Computers that act as servers to provide Internet services should be connected to the **DMZ port** using an Ethernet Cable.

> **Console Port**
> For managing the DFL-900 with CLI commands.

> **C**. LAN1 Port
> For connecting computers and network devices to your LAN.

> **B**. WAN1 Port
> For connecting the DFL-900 to a DSL or Cable Modem supplied by your ISP to access the Internet.

> **D**. DMZ1 Port
> For connecting computers that act as servers for Internet users to access.
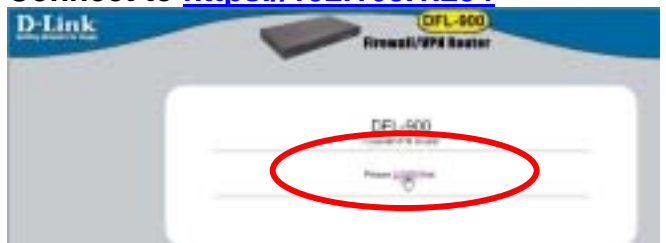
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② Using the Setup Wizard

A computer on your LAN1 must be assigned an IP address and Subnet Mask from the same range as the IP address and Subnet Mask assigned to the DFL-900 in order to be able to make an HTTPS connection using a web browser. The DFL-900 is assigned an IP address of 192.168.1.254 with a Subnet Mask of 255.255.255.0 by default. The computer that will be used to configure the DFL-900 must be assigned an IP address between 192.168.1.1 and 192.168.1.253 with a Subnet Mask of 255.255.255.0 to be able to connect to the DFL-900. This address range can be changed later. There are instructions in the DFL-900 User's Guide, if you do not know how to set the IP address and Subnet Mask for your computer.

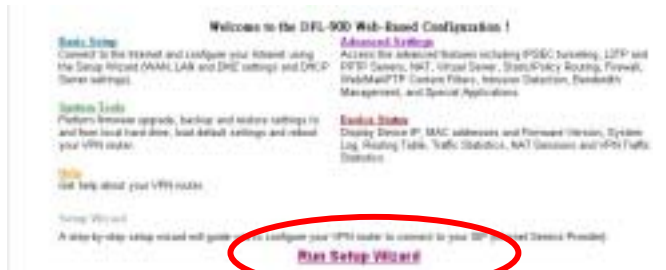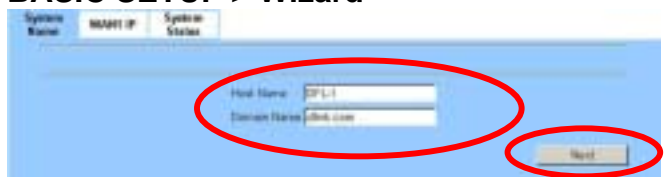|	
Step 1 Login Type "admin" in the account field, "admin" in the Password field and click Login.	**Connect to https://192.168.1.254**
Step 2 Run Setup Wizard Click the Run Setup Wizard.	**After login to https://192.168.1.254** **BASIC SETUP > Wizard**
Step 3 System Name Enter the Host Name and the Domain Name, followed by clicking the Next.	**BASIC SETUP > Wizard**

Step 4 WAN Connectivity Choose the type of `IP Address Assignment` provided by your ISP to access the Internet. Here we have four types to select. This will determine how the IP address of WAN1 is obtained. Click `Next` to proceed.	**BASIC SETUP > Wizard > Next**
Step 4.a — DHCP client If `Get IP Automatically (DHCP)` is selected, DFL-900 will request for IP address, netmask, and DNS servers from your ISP. You can use your preferred DNS by clicking the `DNS IP Address` and then completing the `Primary DNS` and `Secondary DNS` server IP addresses. Click `Next` to proceed.	**BASIC SETUP > Wizard > Next > DHCP**
Step 4.b — Fixed IP If `Fixed IP Address` is selected, enter the ISP-given `IP Address`, `Subnet Mask`, `Gateway IP`, `Primary DNS` and `Secondary DNS` IP. Click `Next` to proceed.	**BASIC SETUP > Wizard > Next > Fixed IP**

Step 4.c — PPPoE client If PPP over Ethernet is selected, enter the ISP-given User Name, Password and the optional Service Name. Click Next to proceed.	**BASIC SETUP > Wizard > Next > PPPoE**
Step 5 System Status Here we select Fixed IP Address method in WAN1 port. Then the DFL-900 provides a short summary of the system. Please check if anything mentioned above is properly set into the system. Click Finish to close the wizard.	**BASIC SETUP > Wizard > Next > Next**

Basic Setup

Setting up a VPN and configuring the Firewall on the DFL-900 requires a deeper understanding of the protocols and security features of the DFL-900 than can be presented here. If you need additional information about setting up a VPN or configuring the Firewall, please consult your *DFL-900 User's Guide* or your Network Administrator.

Please Note:
Each configuration page has buttons on the bottom labeled **Apply** and **Reset**. When you configure any page, you must press the **Apply** button to make the configuration effective. You **CANNOT** configure multiple pages, and then press **Apply**. Each page must have the configuration information 'applied' before going on to the next page.

WAN Settings

The WAN Settings page allows you to modify the protocol that the DFL-900 will use to connect to your ISP and obtain the necessary network address information.

The usage of these pages is essentially the same as those introduced in the wizard pages. The ISP Settings page allows you to modify the way that the DFL-900 obtains its network settings from your Internet Service Provider (ISP). The entry fields on the page will change depending upon which of the following options you choose: **Fixed IP Address, Get IP Automatically,** and **PPPoE**.

1. Fixed IP Address
If your ISP has assigned you an IP address that will never change, choose this option. When this option is chosen, the following fields appear to allow you to enter the network address information. The example shows that the ISP assigns an IP 192.168.17.204, a netmask 255.255.255.0, a default gateway 192.168.17.254, and two DNS (168.95.1.1 and 1.1.1.1).

2. Get IP Automatically

If your ISP uses the Dynamic Host Configuration Protocol (DHCP) to assign an IP address, subnet mask, default gateway and DNS addresses, choose this option.

3. PPPoE
If your ISP uses Point-to-Point Protocol over Ethernet (**PPPoE**), choose this option.
When this option is chosen, the following fields appear to allow you to enter the network
address information:

LAN Settings

The LAN Settings page allows you to modify the IP address and subnet mask that will
identify the DFL-900 on your LAN. This is the IP address you will enter in the URL field
of your web browser to connect to the DFL-900. It is also the IP address that all of the
computers and devices on your LAN will use as their Default Gateway.

LAN1 Status   IP Alias

LAN1 TCP/IP

IP Address `192.168.1.254`   IP Subnet Mask `255.255.255.0`

DHCP Setup

☑ **Enable DHCP Server**

IP Pool Starting Address `192.168.1.1`

Pool Size `20`

Primary DNS Server `192.168.1.254`

Secondary DNS Server `0.0.0.0`

Routing Protocol `None`

Apply   Reset

IP Address – this is the IP address that will be assigned to the LAN port. The default is **192.168.1.254** with a subnet mask of 255.255.255.0.

Subnet Mask – this is the subnet mask corresponding to the LAN port's IP address, above. The default is 255.255.255.0.

The IP address assigned to the DFL-900 here, must be on the same subnet (be within the same IP address range) specified on the **DHCP Servers**. The DHCP Server fields allow you to configure the DFL-900 to be a DHCP Server on your LAN. The DFL-900 can then automatically assign IP addresses, subnet masks, default gateway and DNS server addresses to computers on your LAN. The computers on your LAN must have a DHCP client enabled to get their network address information from the DFL-900.

IP Pool Starting Address – the first IP address of the range from which the DFL-900 will assign to each of the computers on your LAN.

Pool Size – the number of IP addresses which the DFL-900 will assign to the computers on you LAN.

DMZ Settings

The DFL-900 has one **DMZ** port for connecting servers that are exposed to the public Internet for accesses. The **DMZ** port is assigned an IP address of **10.1.1.254** with a subnet mask of 255.255.255.0 by default. Note that the DMZ IP address is on the **10.1.1.x** subnet while the LAN ports are on the **192.168.x.x** subnet by default.

IP Address – this is the IP address that will be assigned to the DMZ port. The default is **10.1.1.254** with a subnet mask of 255.255.255.0.

Subnet Mask – this is the subnet mask corresponding to the DMZ port's IP address, above. The default is 255.255.255.0.

The IP address assigned to the DFL-900 here, must be on the same subnet (be within the same IP address range) specified on the **DHCP Servers**. The DHCP Server fields allow you to configure the DFL-900 to be a DHCP Server on your DMZ. The DFL-900 can then automatically assign IP addresses, subnet masks, default gateway and DNS server addresses to computers on your LAN. The computers on your DMZ must have a DHCP client enabled to get their network address information from the DFL-900.

IP Pool Starting Address – the first IP address of the range from which the DFL-900 will assign to each of the computers on your DMZ.

Pool Size – the number of IP addresses which the DFL-900 will assign to the computers on you DMZ.

Virtual Server Settings

Virtual Servers are computers connected using the **DMZ** port. They act as servers to provide services to your LAN port or other Internet users on the WAN port. The Virtual Server setting page maps one global IP address – an IP address that is valid on the Internet, usually assigned by your ISP – to one local IP address from the IP address range assigned to the DFL-900's **DMZ** port. The default DMZ IP address is **10.1.1.254**, so the servers' IP must range from **10.1.1.1** to **10.1.1.253**, with a subnet mask of 255.255.255.0.

An example virtual server: Customize the rule name as the ftpServer. For any packets with its destination IP equaling to the WAN1 IP (61.2.1.1) and destination port equaling to 44444, ask DFL-900 to translate the packet's destination IP/port into 10.1.1.5/21. Check the Passive FTP at this port to maximize the compatibility of the FTP protocol. This is useful if you want to provide connectivity to passive FTP clients. For passive FTP clients, the server will return them the private IP address and the port number for them to connect back to do data transmissions. Since the private IP from them cannot be routed to our zone, the data connections would fail. After enabling this feature, the DFL-900 will translate the private IP/port into an IP/port of its own. Thus the problem is gracefully solved. Click Apply to proceed.

Dest. IP– a unique, global IP address that is valid in the Internet. This will be one of the IP addresses assigned by your ISP, or the single IP address assigned by your ISP, if your ISP assigns you only one IP address. Use Netmask to specify a range of the dest. IP (see the example above).

Service – TCP or UDP or Any of them. Choose a port number (range) to explicitly indicate which application traffic to redirect.

Translated Destination IP – the IP address of the computer that will act as a server for this application you are setting up.

APPENDIX

To assign a Static IP address to the Ethernet adapter, please do the following steps. The examples below are using a DFE-530TX+ in Microsoft Windows XP, and Mac OS X.
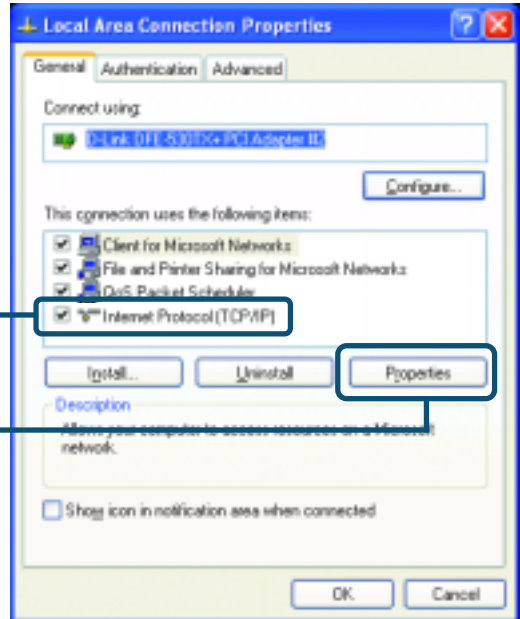**Note**: Screens in other Operating Systems will look a bit different, but the steps are the same.

For **Microsoft Windows XP:**
Go to **Start** > **right click** on
My Network Places >
select **Properties** > **Double-click** on
the **Network Connection** associated
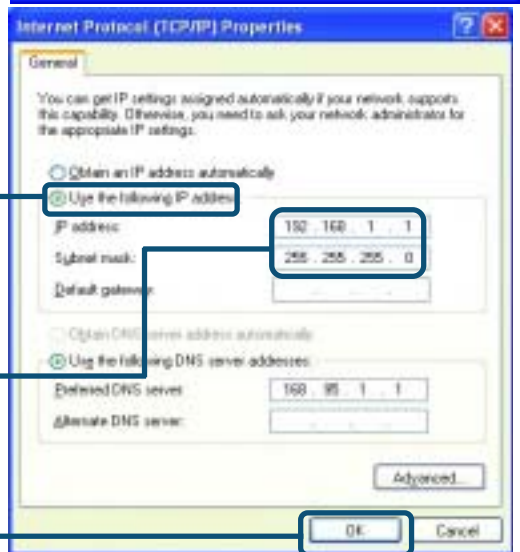with the Ethernet adapter (i.e.,
D-Link DFE-530TX+).

Click Internet Protocol (TCP/IP)

Click Properties

Select Use the following IP address

Enter the following:
IP address: 192.168.**1.1**
Subnet mask: 255.255.255.0

Click OK

Setting a Static IP address for
Apple Macintosh OS X:

Go to **the Apple Menu**
and **Select System
Preferences**.

**Click on
Network**

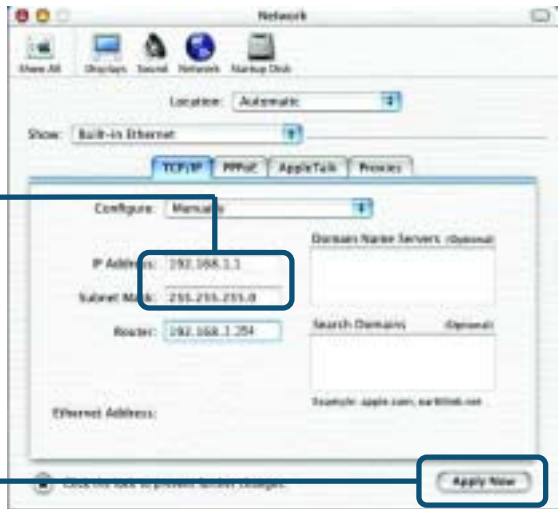**Select Built-in
Ethernet in the Show
pull-down menu**

**Select Manually in
the Configure
pull-down menu**

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Enter the following:
IP address: 192.168.**1.1**
Subnet mask: 255.255.255.0

Enter the IP address information,
the Subnet Mask and the
Router's IP address.

**Click on
Apply Now**

NOTES

Technical Support

Software updates and documentation are available on the **D-Link** website.

D-Link provides free technical support for customers within the United States for the duration of the warranty period on this product.

U.S. customers can contact **D-Link** technical support through our web site or by phone.

D-Link Technical Support over the Telephone:
(877) 453-5465
24 hours a day, seven days a week

D-Link Technical Support over the Internet:
http://support.dlink.com
email: support@dlink.com